

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: GREAT HILL SCHOOL POND	Lake Area (ha):	5.99
Town: TAMWORTH	Maximum depth (m):	2.1
County: Carroll	Mean depth (m):	0.6
River Basin: Saco	Volume (m ³):	38500
Latitude: 43°52'52" N	Relative depth:	0.8
Longitude: 71°18'30" W	Shore configuration:	1.09
Elevation (ft): 963	Areal water load (m/yr):	5.60
Shore length (m): 950	Flushing rate (yr ⁻¹):	8.70
Watershed area (ha): 62.5	P retention coeff.:	0.64
% watershed ponded: 0.0	Lake type:	natural w/dam

BIOLOGICAL:

4 January 1996

25 July 1995

DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 45%	CHRYSOSPHAERELLA 75%
	#2	(ALL ALGAE SPARSE)	PERIDINIUM 20%
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			17.03
DOM. ZOOPLANKTON (% TOTAL)	#1	KELLICOTTIA 45%	KERATELLA 84%
	#2	KERATELLA 33%	NAUPLIUS LARVA 6%
	#3		
ROTIFERS/LITER		297	2392
MICROCRUSTACEA/LITER		15	243
ZOOPLANKTON ABUNDANCE (#/L)		320	2635
VASCULAR PLANT ABUNDANCE			Very abundant
SECCHI DISK TRANSPARENCY (m)			1.4
BOTTOM DISSOLVED OXYGEN (mg/L)		2.1	0.6
BACTERIA (E. coli, #/100 ml)	#1		< 1
	#2		< 1
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m³) : None
Anoxic volume (m³) : 500

CHEMICAL:

Lake: GREAT HILL SCHOOL POND
Town: TAMWORTH

	4 January 1996		25 July 1995		
DEPTH (m)	1.0		1.0		
pH (units)	5.1		5.5		
A.N.C. (Alkalinity)	1.3		0.8		
NITRATE NITROGEN	< 0.10		< 0.10		
TOTAL KJELDAHL NITROGEN	0.37		0.82		
TOTAL PHOSPHORUS	0.009		0.027		
CONDUCTIVITY (μ mhos/cm)	24.0		14.2		
APPARENT COLOR (cpu)	90		55		
MAGNESIUM			0.17		
CALCIUM			< 1.0		
SODIUM			1.1		
POTASSIUM			< 0.40		
CHLORIDE	< 2		< 2		
SULFATE	4		3		
TN : TP	41		30		
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1995

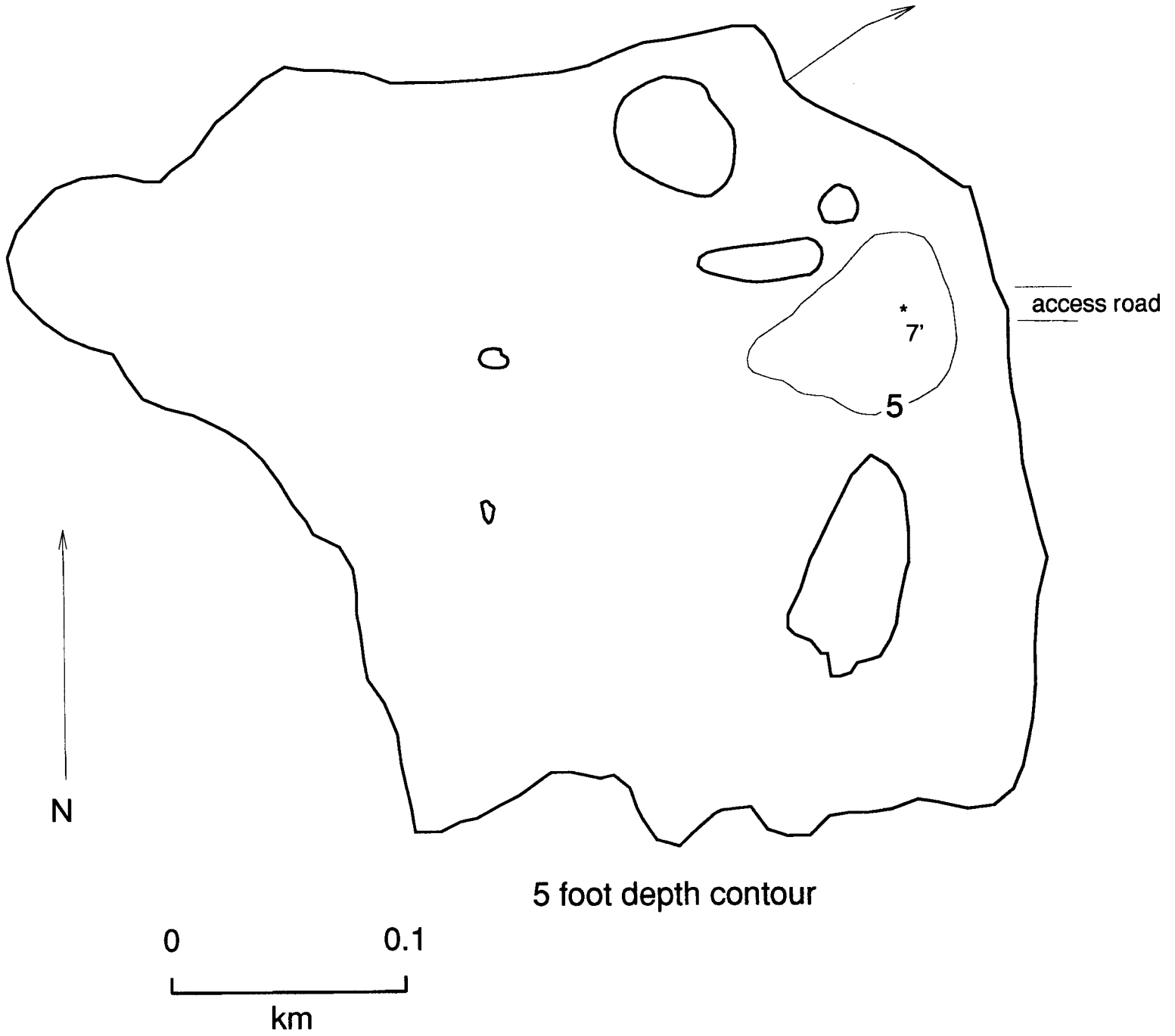
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	4	6	3	13	Eutro.

COMMENTS:

1. Also known as Duck Pond and Hemenway Pond.
2. This is a very shallow and very productive undeveloped pond located within the Hemenway State Forest. It is essentially an open water marsh. Macrophytes, phytoplankton and zooplankton were all very abundant.

Great Hill School Pond

Tamworth

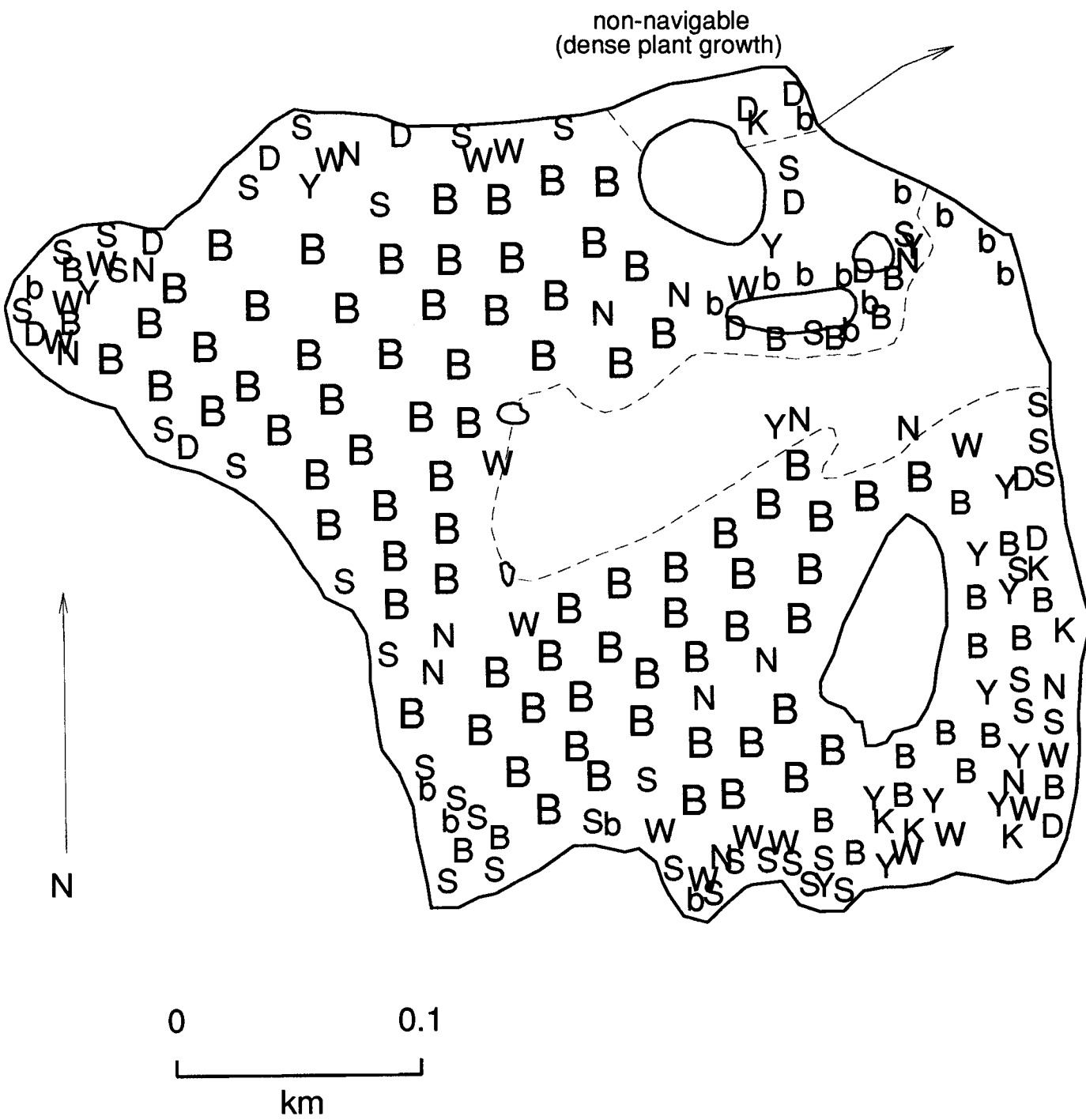


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*Dissolved oxygen values are in mg/L

Great Hill School Pond

Tamworth



AQUATIC PLANT SURVEY

LAKE: GREAT HILL SCHOOL POND	TOWN: TAMWORTH	DATE: 07/25/95
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		OVERALL ABUNDANCE: Very abundant
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GENERAL OBSERVATIONS:

1. Pitcher plants and sundew were present along the shore. The presence of these plants along with the low pH and ANC values and high color suggest bog-like conditions.
2. Non-flowering thread-like rooted plants were over most of the bottom along with small clumps of filamentous algae.